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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/587,146

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Hiroshige Inoue

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EXAMINER

READY, BRYAN

ART UNIT

PAPER NUMBER

2884

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/587,146	<b>Applicant(s)</b> INOUE, HIROSHIGE	
	<b>Examiner</b> BRYAN READY	<b>Art Unit</b> 2884	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 48-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 48-71 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2011 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Drawings*

1. The drawings were received on 28 April 2011. These drawings are accepted.

### *Claim Objections*

2. Claim 53 is objected to because of the following informalities: Claim 53, line 2, "said sending device" lacks proper antecedent basis. Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 48-71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inose (US 6,385,407) in view of Palumbo et al. (US 5,999,759).

- a. Inose discloses (Abstract; Figures 1-9): a toner supply system including a toner supply container (100) and a toner supply apparatus (400) to which said toner supply container (100) is detachably mountable (400; col. 2, lines 58-67; col. 3, lines 57-68), said system comprising: said toner supply container (100) including: a container body (110) having a toner containable inner space (120, U); and a sensor (40; *see col. 7, lines 4-32; '...a sensor for detecting the amount of ink remaining in the storage portion may be provided in the IC unit 40...'.*), integrally provided on a peripheral and axial end surface portion (see Fig. 1 and col. 4, lines 16-46) said container body (110) and

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configured to detect and electrically output (via IC unit 40) signal information corresponding to a remaining toner amount in said container body (110; col. 7, lines 4-32); a sending portion (*including antenna 12*) configured and positioned to wirelessly send information (“non-contact” communication; see col. 2, lines 58-67, and col. 3, lines 1-4) corresponding to the remaining toner amount (U) in said container body (110) detected by said sensor (40); said sensor (40) and said sending device (~12) provided integrally on a common substrate (Fig. 4; col. 7, lines 4-32); said sensor (40)/ detecting device (40) provided on a peripheral surface of said container body (see Fig. 1); said sensor (40) is a pressure sensor (col. 7, lines 4-32); an electrical contact portion (*including antenna 12 and resonance capacitor 14; see col. 5, lines 15-47*) configured and positioned to receive driving energy for driving said sensor (40) and said sending device (~12); and said toner supply apparatus including (400) a receiving portion (200) configured and positioned to receive information (wireless) sent by said sending portion (~12).

b. Inose differs from the instant claimed invention in not explicitly disclosing: said toner supply apparatus to include a container body as a *rotatable* container body; a *toner feeding portion* configured and positioned to feed the toner in said container body toward a toner discharge opening with rotation of said rotatable container body; a *drive force receiving portion* configured and positioned to receive a rotational driving force for rotating said container body from a *driving portion*; a notification portion configured and positioned to notify of information corresponding to the remaining toner amount in said container body detected by said sensor with rotation of said container body; and, said

notification portion including a *displaying device* configured and positioned to display the information corresponding to the remaining toner amount in said container body.

c. Palumbo et al. disclose (Abstract; Figures 1-2): a rotatable (*see arrow 54*) toner container body (23); a toner feeding portion (including element 52) configured and positioned to feed a toner in said container body (23) with rotation of said rotatable container body (see col. 4, lines 22-34); and, a toner supply apparatus (see Fig. 2), to which toner container body (23) is detachably mountable (Abstract; lines 1-2), including: a driving portion (including element 52) configured and positioned to apply a rotational driving force (in direction of arrow 54) to a drive force receiving portion of said toner container body (23; see Fig. 1); and a notification portion configured and positioned to notify of a remaining toner amount (see Abstract, lines 11-17); and said notification portion including a display device configured and positioned to display the remaining toner amount in said toner supply container (see Abstract, lines 11-17).

d. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to employ the state of the art toner remaining amount detection and communication techniques of Inose within a conventional rotatable toner container, employing conventional toner feeding/ driving portions, and toner remaining amount display notification, as disclosed by Palumbo et al., as such only requires adapting known techniques to a known device ready for improvement yielding only predictable results, namely, a conventional rotatable toner supply container and toner remaining

amount display notification benefiting from the use of wireless integrated circuits capable of singularly and wirelessly performing a plurality of discrete functions such as toner remaining amount determination and notification.

### ***Response to Arguments***

5. Applicant's arguments filed 28 April 2011 have been fully considered but they are not persuasive.

Applicants assert that the sensor of Inose does not rotate integrally with the container body, inasmuch as any container body in Inose does not rotate. Additionally, Applicant's assert that the bar code 56 of Palumbo et al. while rotating with the toner cartridge 23, does not detect information corresponding to a remaining toner amount in the container body with rotation of the container body, inasmuch as the bar code 56 is a passive component, not a sensor, and does not possess detection capabilities. Notably, Applicants further assert, the bar code reader 58 in Palumbo et al. is not provided on the container body, nor does it rotate integrally with a container body, but is instead provided as a stationary component above the toner cartridge 23.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Examiner asserts that the bar code of Palumbo et al., which is integrally formed on the exterior of a conventional rotating toner container for storing and sharing basic

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information about the toner cartridge for verification purposes (e.g., serial numbers, batch numbers, material information, etc.), also functions to provide information useful in the determination of a toner remaining amount, albeit in a rudimentary manner.

Accordingly, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to improve upon this technique with the state of the art toner remaining sensing techniques disclosed by Inose employing integrated circuits capable of singularly and wirelessly performing a plurality of discrete functions such as toner remaining amount determination and notification.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN READY whose telephone number is (571)272-9018. The examiner can normally be reached on Mon.-Fri., 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David P. Porta/  
Supervisory Patent Examiner, Art  
Unit 2884

BPR